

Abstract of the Disclosure

Methods and apparatus for supplying power for use in metering electrical energy over a wide range of voltages with a single meter are disclosed. The wide ranging meter includes a processing unit for processing divided input voltage and a current component in order to determine electrical energy metering values. The processing unit is operable in response to supply voltages. A power supply, connected to receive the undivided voltage component, generates the supply voltages over the wide dynamic range. It is especially preferred for the power supply to include a transformer having first, second and third windings, wherein the undivided voltage component is provided to the first winding and wherein the second winding defines the output of the power supply. A switching member is connected to the first winding for permitting and preventing the flow of current in response to a control signal. A control member generates the control signal in response to the output of the power supply. It is also preferred for the control signal to disable the witch member. It is further preferred for the power supply to include a voltage blocking clamp, connected to the transformer for blocking the voltage applied to the transformer. It is still further preferred for an oscillator to be used to generate an oscillating signal for switching the switching member ON and OFF so that the switching member is provided a substantially constant OFF time.